

AMENDMENTS TO THE CLAIMS

The following is a listing of claims that replaces all prior versions, and listings, of claims in the application:

Claims 1-16 (Canceled) .

Claim 17 (Original): A method for identifying a candidate agent as a compound that modulates CENP-E activity, said method comprising the steps of:

- (i) determining CENP-E activity in the presence of a candidate agent at a control concentration, wherein the CENP-E activity comprises at least one activity selected from the group consisting of plus end-directed microtubule motor activity, ATPase activity, and microtubule binding activity; and
- (ii) determining said CENP-E activity in the presence of the candidate agent at a test concentration, wherein a change in activity between the test concentration and the control concentration of said candidate agent indicates the identification of a compound that modulates CENP-E activity.

Claim 18 (Original): A method of claim 17, further comprising the step of isolating biologically active CENP-E from a cell sample.

Claim 19 (Original): A method of claim 17, wherein the biologically active CENP-E is human CENP-E.

Claim 20 (Original): A method of claim 17, wherein the biologically active CENP-E is *Xenopus* CENP-E (XCENP-E).

Claim 21 (Original): A method of claim 17, wherein the biologically active CENP-E comprises a motor domain of *Xenopus* CENP-E (XCENP-E).

Claim 22 (Original): A method of claim 17, wherein the biologically active CENP-E comprises an amino acid sequence of a XCENP-E motor domain of SEQ ID NO:1.

Claim 23 (Original): A method of claim 17, wherein said activity is plus end-directed microtubule motor activity.

Claim 24 (Original): A method of claim 17, wherein said change in activity is a decrease.

Claim 25 (Original): A method of claim 17, wherein said change in activity is an increase.

Claim 26 (Original): A method of claim 17, wherein said compound identified is a lead therapeutic compound.

Claim 27 (Original): A method of claim 26, wherein said compound is an antibody.

Claim 28 (Original): A method of claim 27, wherein said antibody specifically binds human CENP-E.

Claim 29 (Original): A method of claim 27, wherein said method further comprises modifying said antibody to be a humanized antibody.

Claim 30 (Original): A method of claim 17, wherein said compound identified is a lead bioagricultural compound.

Claim 31 (Original): A method of claim 17, wherein said compound identified is a lead diagnostic compound.

Claim 32 (Original): A method of claim 31, wherein said compound identified is an antibody.

Claim 33 (Original): A method of claim 32, wherein said antibody specifically binds to human CENP-E.

Claim 34 (Original): A method of claim 32, wherein said method further comprises modifying said antibody to be a humanized antibody.

Claim 35 (Original): A method of claim 17, wherein said method is performed in a plurality and wherein said plurality of methods are performed simultaneously.

Claims 36-42 (Cancelled).